

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

In the Claims:

Claim 1 (currently amended): A method for coding a speech signal comprising:

estimating a spectral content of a speech signal ~~by determining a defined reference spectral response representative of the spectral content of the speech signal;~~

determining if the estimated spectral content of the speech signal is representative of one of a plurality of defined reference spectral responses including an IRS spectral response and an MIRS spectral response;

selecting a preferential coding algorithm from an assortment of coding algorithms based on the determining ~~the estimated spectral content of the speech signal;~~

coding the speech signal in accordance with the selected coding algorithm, where the selected algorithm controls the operation of at least one of a pre-processing filter, a post-processing filter, a coding control coefficient, a weighting filter, a synthesis filter, and a quantization table;

wherein the coding of the speech signal in accordance with the selected coding algorithm compensates for at least one of a ~~spectrally flat speech signal~~, an IRS speech signal, and an MIRS speech signal to produce a frequency-response compensated speech signal.

Claim 2 (canceled).

Claim 3 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of the pre-

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

processing filter, the desired filter response configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 4 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of the post-processing filter, the desired filter response configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 5 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of the weighting filter, the desired filter response configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 6 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of the synthesis filter, the desired filter response configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 7 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of at least one of the synthesis filter and the weighting filter of an adaptive codebook section of an encoder.

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

Claim 8 (original): The method according to claim 1 wherein the selection of the preferential coding algorithm comprises selection of a desired filter response of at least one of the synthesis filter and the weighting filter of a fixed codebook section of an encoder.

Claim 9 (original): The method according to claim 1 wherein the quantization table comprises at least one of an adaptive codebook section and a fixed codebook section of an encoder.

Claim 10 (currently amended): A method for coding a speech signal, the method comprising:

estimating a spectral content of a speech signal ~~by determining a defined reference spectral response representative of the spectral content of the speech signal;~~

determining if the estimated spectral content of the speech signal is representative of one of a plurality of defined reference spectral responses including an IRS spectral response and an MIRS spectral response;

varying at least one coding parameter based on ~~the estimated spectral content of the speech signal~~ the determining;

coding the speech signal in accordance with the varied coding parameter, the varied coding parameter associated with at least one of a preprocessing filter, a post-processing filter, a coding control coefficient, a weighting filter, a synthesis filter, and a quantization table;

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

wherein the coding of the speech signal in accordance with the varied coding parameter compensates for at least one of ~~a spectrally flat speech signal~~, an IRS speech signal, and an MIRS speech signal to produce a frequency-response compensated speech signal.

Claim 11 (canceled).

Claim 12 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of the pre-processing filter, the desired coding parameter configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 13 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of the post-processing filter, the desired coding parameter configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 14 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of the weighting filter, the desired coding parameter configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

Claim 15 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of the synthesis filter, the desired coding parameter configured to enhance perceptual voice quality of the coded speech signal based on the estimated spectral content.

Claim 16 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of at least one of the synthesis filter and the weighting filter of an adaptive codebook section of an encoder.

Claim 17 (original): The method according to claim 10 wherein the variation of the at least one coding parameter comprises selection of a desired coding parameter of at least one of the synthesis filter and the weighting filter of a fixed codebook section of an encoder.

Claim 18 (original): The method according to claim 10 wherein the quantization table comprises at least one of an adaptive codebook section and a fixed codebook section of an encoder.

Claim 19 (new): The method according to claim 1 wherein the estimating, the determining, the selecting and the coding are performed periodically during a conversation that exceeds a duration threshold, such that during the conversation the selecting may select a different preferential coding algorithm from the assortment of coding algorithms based on the determining.

Application Serial No.: 09/896,682
Attorney Docket No.: 01CON303P

Claim 20 (new): The method according to claim 10 wherein the estimating, the determining, the varying and the coding are performed periodically during a conversation that exceeds a duration threshold, such that during the conversation the varying may further vary the at least one coding parameter based on the determining.